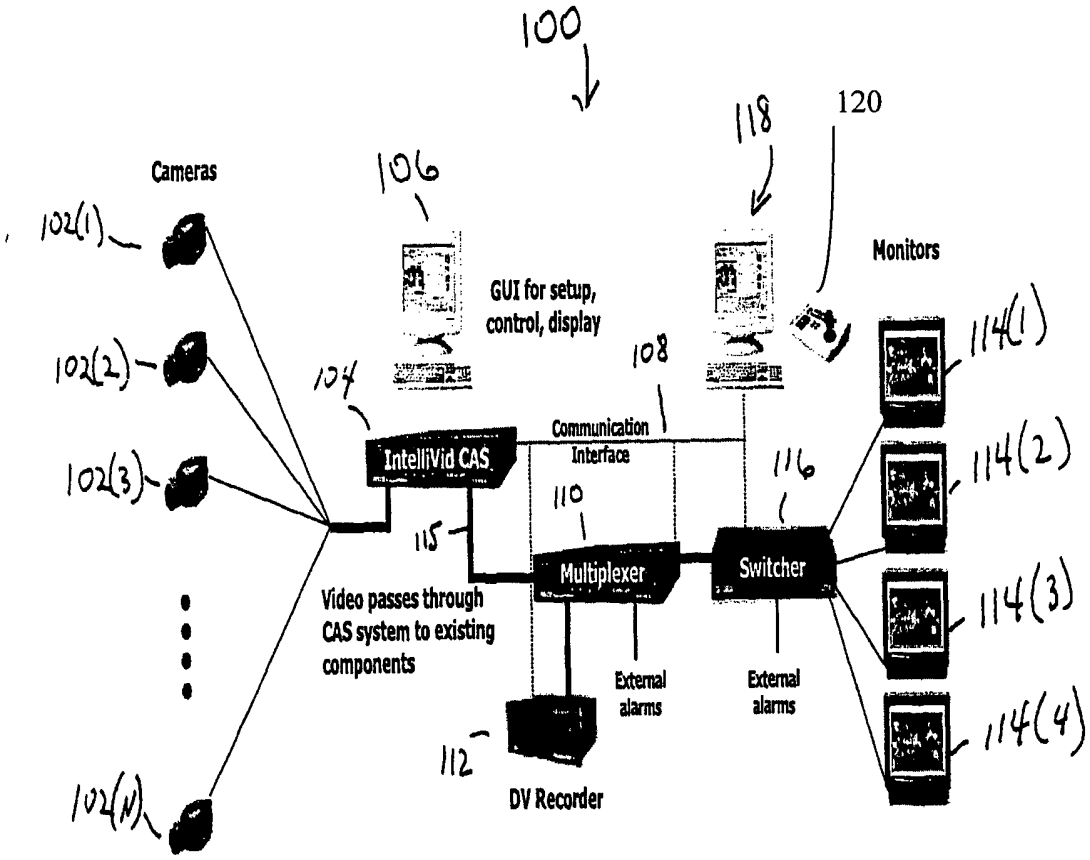
100
Cameras
102(1)
102(2)
102(3)
102(N)
106
GUI for setup, control, display
104
IntelliVid CAS
Video passes through CAS system to existing components
115
108
Communication Interface
110
Multiplexer
112
DV Recorder
External alarms
118
120
Monitors
116
Switcher
External alarms
114(1)
114(2)
114(3)
114(4)

Figure 1

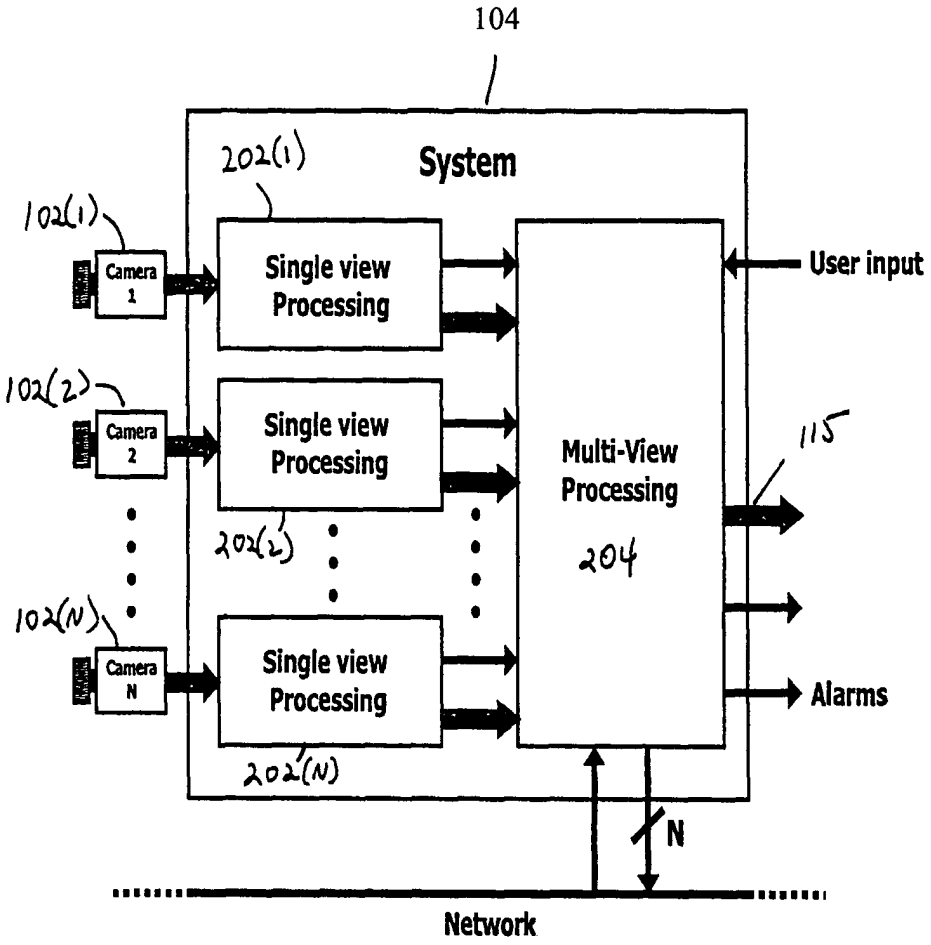
104
System
202(1)
102(1)
Camera 1
Single view Processing
102(2)
Camera 2
Single view Processing
202(2)
102(N)
Camera N
Single view Processing
202(N)
Multi-View Processing
204
115
User input
Alarms
N
Network

Figure 2

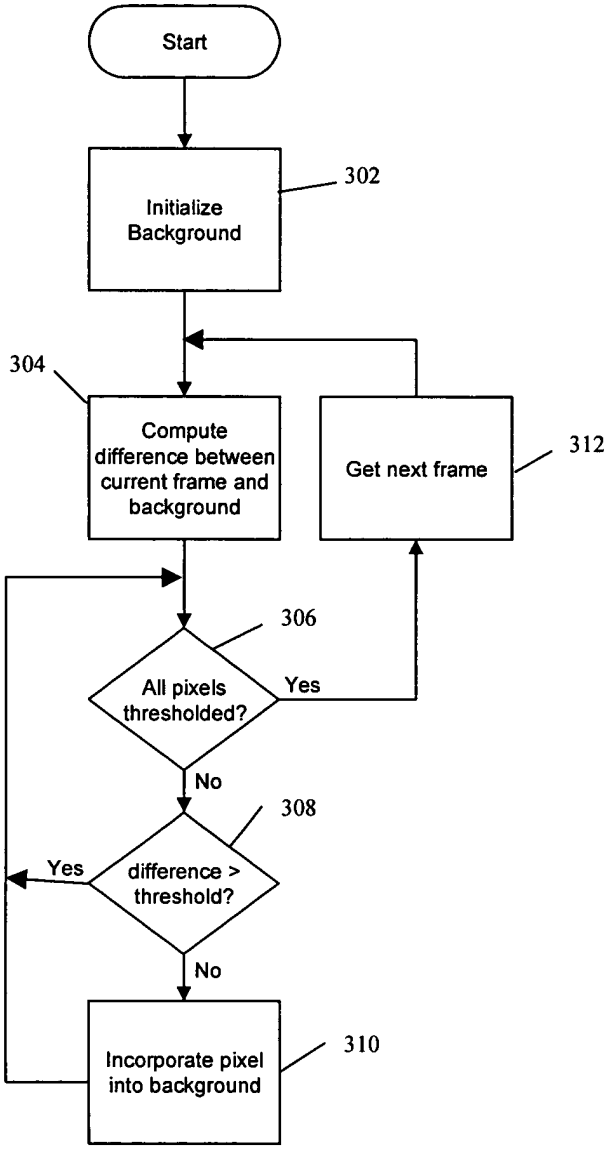
Start
Initialize Background
302
304
Compute difference between current frame and background
Get next frame
312
306
All pixels thresholded?
Yes
No
308
Yes
difference > threshold?
No
Incorporate pixel into background
310

Figure 3

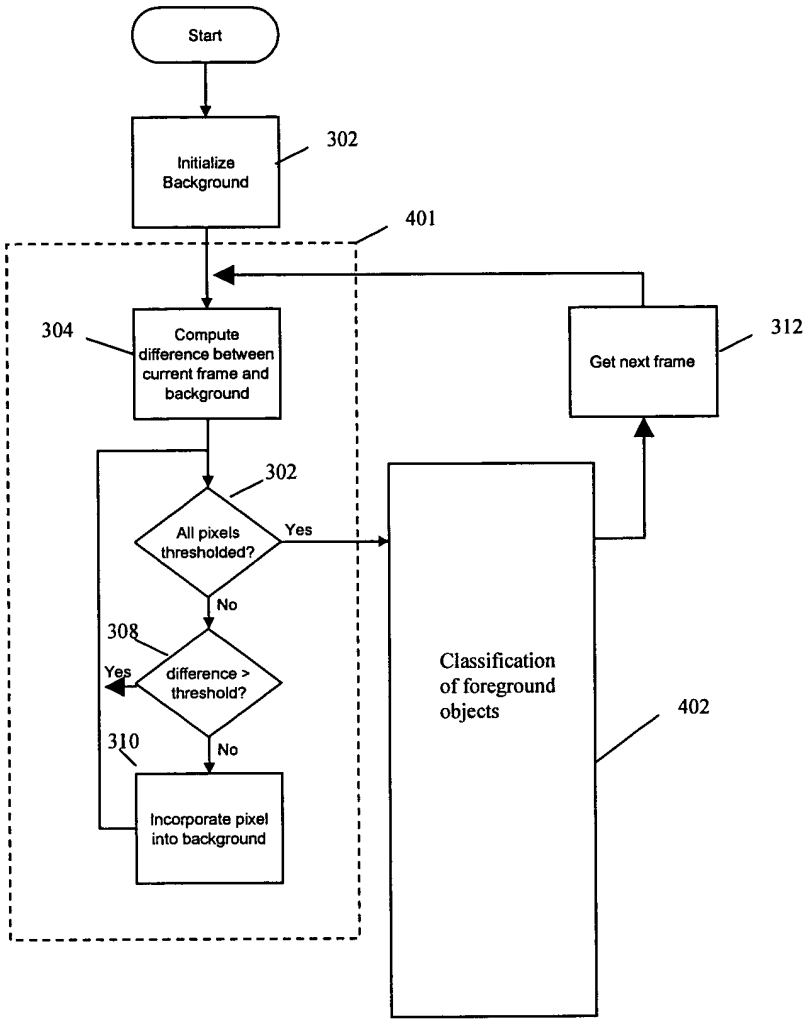
Start
Initialize Background
302
401
304
Compute difference between current frame and background
312
Get next frame
302
All pixels thresholded?
Yes
No
308
Yes
difference > threshold?
310
No
Incorporate pixel into background
Classification of foreground objects
402

Figure 4

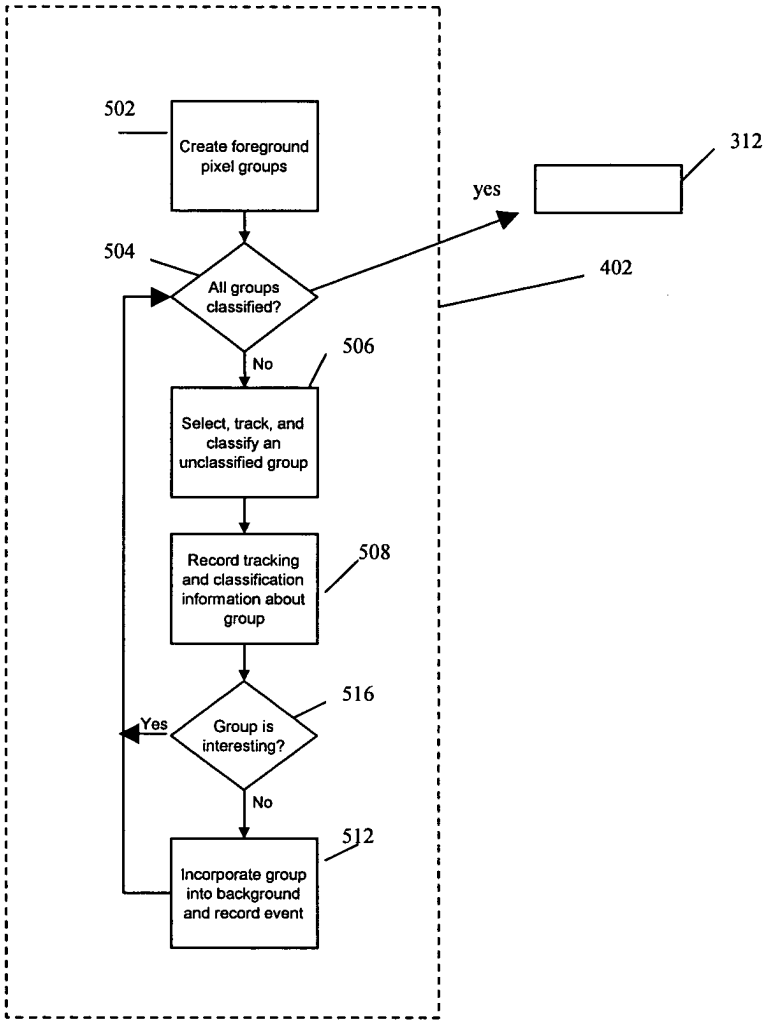
502
Create foreground pixel groups
504
All groups classified?
yes
312
402
No
506
Select, track, and classify an unclassified group
Record tracking and classification information about group
508
516
Yes
Group is interesting?
No
512
Incorporate group into background and record event

Figure 5

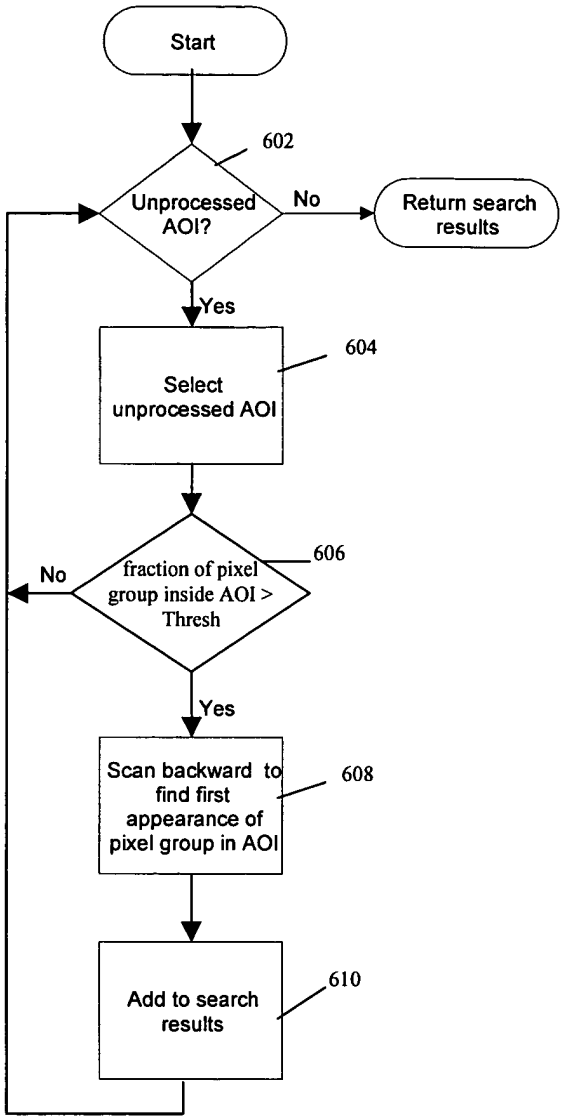
Start
602
Unprocessed AOI?
No
Return search results
Yes
604
Select unprocessed AOI
606
fraction of pixel group inside AOI > Thresh
No
Yes
608
Scan backward to find first appearance of pixel group in AOI
610
Add to search results

Figure 6